

Lexan* 9034 Sheet

Product Datasheet

Description

Lexan* 9034 uncoated polycarbonate sheet is the standard grade of Lexan sheet for transparent protective glazing. High-impact Lexan 9034 sheet may be an excellent candidate for primary glazing, or on either side of existing glazing for economical protection against breakage or intrusion. A better insulator than glass, Lexan 9034 sheet may contribute to lower energy costs.

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Specific Gravity	ASTM D792	—	1.20
Refractive Index @ 77°F	ASTM D542A	—	1.586
Light Transmission (Average), 1/8" disk	ASTM D1003	%	88
Rockwell Hardness	ASTM D785	—	M70
Abrasion Resistance, Taber Abrader, CS-17 wheel	ASTM D1044	mg/1,000 cycles	10
Water Absorption, Equilibrium, 24 hrs	ASTM D570	%	0.15
@ 73°F			0.35
@ 212°F			0.58
Mechanical			
Tensile Strength @ Yield	ASTM D638	psi	9,000
@ Ultimate			9,500
Tensile Modulus	ASTM D638	psi	345,000
Flexural Strength	ASTM D790	psi	13,500
Flexural Modulus	ASTM D790	psi	345,000
Flexural Endurance @ 1,800 cycles/min, 73°F, 50% RH	ASTM D671	psi	1,000
Compressive Strength	ASTM D695	psi	12,500
Compressive Modulus	ASTM D695	psi	345,000
Elongation	ASTM D638	%	110
Poisson's Ratio	—	—	0.37
Izod Impact Strength Notched @ 1/8"	ASTM D256A	ft-lbs/in	12–16
Unnotched @ 1/8"			60 (no failure)
Tensile Impact Strength, S-Type Specimen	ASTM 1822	ft-lbs/in ²	225–300
Shear Strength @ Yield	ASTM D732	psi	6,000
@ Ultimate			10,000
Shear Modulus	ASTM D732	psi	114,000
Deformation Under Load @ 4,000 psi @ 73°F	ASTM D621	%	0.2
@ 158°F			0.3
Thermal			
Coefficient of Thermal Expansion	ASTM D696	in/in/°F	3.75 × 10 ⁻⁵
Coefficient of Thermal Conductivity	ASTM C177	Btu•in/hr•ft ² •°F	1.35
Specific Heat @ 40°C		cal/gm/°C	0.30
Heat Deflection Temperature @ 264 psi	ASTM D648	°F	270
@ 66 psi			280
Brittle Temperature	ASTM D746	°F	211
Flammability			
Horizontal Burn (Flame Spread) AEB	ASTM D635	in	<1
Electrical			
Dielectric Constant @ 10 Hz	ASTM D150	—	2.96
@ 60 Hz			3.17
Volume Resistivity	ASTM D257	ohm-cm	8.2 × 10 ¹⁶
Power Factor @ 60 Hz	ASTM D150		0.0009
@ 1,000,000 Hz			0.010
Arc Resistance	ASTM D495	sec	
Stainless Steel Strip Electrodes			10–11
Tungsten Electrodes			120

♦ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local SABIC Innovative Plastics representative or SABIC Innovative Plastics Quality Services Department.

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Lexan*



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Americas:

SABIC Innovative Plastics
Specialty Film & Sheet
One Plastics Avenue
Pittsfield, MA 01201
USA
Tel. (1) (413) 448 5400
Fax. (1) (413) 448 7506
Toll free: 1-800 451 3147

Europe:

SABIC Innovative Plastics
Specialty Film & Sheet
Plasticslaan 1
NL - 4612 PX Bergen op Zoom
The Netherlands
Tel. (31) (164) 292911
Fax. (31) (164) 293272

Pacific:

SABIC Innovative Plastics
Specialty Film & Sheet
1266 Nanjin Road (W)
Plaza 66, 17th Floor
200040 Shanghai, China
Tel. (86) 21 62881088
Fax. (86) 21 62880818

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MATERIAL SAFETY DATA SHEET

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1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Trade Name:	LEXAN* Sheet
Product ID:	9034 -112
Product Description:	Poly (bisphenol-A-carbonate) [CASRN 111211-39-3 or 103598-77-2] Sheet
Product Type:	Commercial Product
Recommended use:	May be used as received, processed or thermoformed to produce other articles, or as a component of other industrial products.
Company:	SABIC Innovative Plastics One Plastics Avenue Pittsfield, MA 01201 USA (413) 448-5400 www.sabic-ip.com
Emergency Telephone Number:	800/447-4545
Emergency Transportation/CHEMTREC (24 HOUR)	800/424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

This product consists primarily of high molecular weight polymers which are not expected to be hazardous.

5. FIRE-FIGHTING MEASURES

Explosive Limits

upper: Not applicable
lower: Not applicable

Suitable Extinguishing Media:

Water spray mist or foam.

Extinguishing media which must not be used for safety reasons:

Carbon dioxide and dry chemical are not recommended because their lack of cooling capacity may permit re-ignition.

Hazards from Combustion Products:

Fire will produce dense black smoke containing hazardous combustion products, carbon oxides, hydrocarbon fragments

Special Protective Equipment for Firefighters:

Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products.

Specific Hazards:

Take precautionary measures against static discharges. Thermal decomposition can lead to release of irritating gases and vapors. Dust formed by operations such as cutting or grinding may form an explosive mixture in air.

6. ACCIDENTAL RELEASE MEASURES

Clean up:

Gather and store in a closed container pending a recyclability or waste disposal evaluation.

Personal Precautions:

See section 8.

Environmental Precautions:

Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

7. HANDLING AND STORAGE

Handling:

Handle in accordance with good industrial hygiene and safety practice. Provide for appropriate exhaust ventilation and dust collection at machinery. Avoid dust formation. Accumulation of waste films, sheets and/or masking may create a slipping hazard.

Storage:

Keep away from heat and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures to Reduce Exposure:	Handle in accordance with good industrial hygiene and safety practice. Processing fume condensate may be a fire hazard and toxic; remove periodically from exhaust hoods, ductwork, and other surfaces using appropriate personal protection.
Hand Protection:	Protective gloves
Eye Protection:	Safety glasses
Respiratory Protection:	When using this product at elevated temperatures, implement engineering systems, administrative controls or a respiratory protection program (including a respirator approved for protection from organic vapors, acid gases and particulate matter) if processing fumes are not adequately controlled or operators experience symptoms of overexposure. If dust or powder are produced from secondary operations such as sawing or grinding, use a respirator approved for protection from dust.
Skin and Body Protection:	Long sleeved clothing
Hygiene Measures:	When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Sheet or film
Color:	Various
Odor:	None or slight
Melting point/range:	This product does not exhibit a sharp melting point but softens gradually over a wide range of temperatures.
Explosive Limits	
upper:	Not applicable
lower:	Not applicable

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions. Hazardous polymerization does not occur.
Conditions to Avoid:	Do not exceed melt temperature recommendations in product literature.
Hazardous Decomposition Products:	Processing fumes evolved at recommended processing conditions may include trace levels of hydrocarbon fragments, phenol, alkylphenols, diarylcarbonates.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

LD50/oral/rat:	>5000 mg/kg, estimated
LD50/dermal/rabbit:	>2000 mg/kg, estimated
Inhalation:	Inhalation unlikely due to physical form.
Eye Contact:	Resin particles, like other inert materials, are mechanically irritating to eyes.
Skin contact:	Not likely to cause irritation.
Ingestion:	Ingestion not likely due to physical form.
Chronic Toxicity:	No information available
IARC:	Not Listed
OSHA:	Not regulated
NTP:	Not tested
Remarks:	The toxicological data has been taken from products of similar composition
Special Studies:	Processing fumes from similar products are not considered toxic. In acute inhalation tests, laboratory rats were exposed to processing fumes at concentrations exaggerating those that would likely occur in workplace situations. No deaths or signs of toxicity, except transient irritancy in some cases, were noted during the 6 hour fume exposure tests. There were no distinct or consistent treatment related tissue or organ changes noted in gross necropsies.

12. ECOLOGICAL INFORMATION

Other information:	Ecological damages are not known or expected under normal use.
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13. DISPOSAL CONSIDERATIONS

Waste Disposal:	Recycling is encouraged. Landfill or incinerate in accordance with federal, state and local requirements. Collected processing fume condensates and incinerator ash should be tested to determine waste classification.
US EPA Waste number:	None

14. TRANSPORT INFORMATION

Transport Classification:

Not regulated as hazardous for shipment, unless noted below, under current transportation guidelines.

DOT

ADR/RID/ADNR

IMDG

ICAO

IATA-DGR

MEXICO

15. REGULATORY INFORMATION

International Inventories:

These film and sheet products are considered articles and thus exempt from inventory listing.

CERCLA/SARA 311/312/313:

This product is a non-hazardous article and therefore not subject to the requirements of Title III of SARA (Emergency Planning and Community Right-To-Know Act).

Canada:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS hazard class:

Non-controlled

California Proposition 65:

This product does not contain components known to the State of California to cause cancer and/or reproductive effects.

RoHS EU Directive 2002/95/EC:

This product complies with RoHS - it does not intentionally contain banned chemicals.

16. OTHER INFORMATION

LEXAN* Sheet is a registered trademark of SABIC Innovative Plastics

Prepared by: Product Stewardship & Toxicology

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End of Material Safety Data Sheet